

## ABSTRACT

Disclosed is an apparatus for automated synthesis containing a shaker deck with a plurality of reaction blocks containing a plurality of reaction wells, an arm containing an array of extending units capable of actuating physical steps along a plurality of axes of each reaction block, each reaction block being situated on a turntable, each turntable being further capable of rotating the reaction block along a central axis. Also disclosed are methods of preparing a peptide, oligonucleotide and small molecules using the apparatus.

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